

Rec'd PCT PTO 11 APR 20

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/31864

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A43B 13/18, 21/30, 21/32; A61F 2/66

US CL : 36/92, 27, 28, 38,7.8, 151, 168, 179

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 36/92, 27, 28, 38,7.8, 151, 168, 179, 91, 25R, 29, 37, 158, 173

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,701,686 A (HERR et al.) 30 December 1997, wholes document relating to spring insert	1-9
Y	US 324,065 A (ANDREWS) 11 August 1885, see Figure 2 and related description	1-9
Y	US 5,396,718 A (SCHULER et al.) 14 March 1995, see whole document relating to reference 20	1-5 and 7-9
Y	US 6,029,374 A (HERR et al.) 29 February 2000, whole document, see Figure 11B especially.	1-9
Y	US 6,247,249 B1 (LINDQVIST) 19 June 2001, whole document	1-9
Y	US 6,449,878 B1 (LYDEN) 17 September 2002, whole document especially that refering to 60.1 and 61.1	1-9

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

24 February 2004 (24.02.2004)

Date of mailing of the international search report

15 MAR 2004

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